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OPTIONAL FORM NO. 10
5010-104

UNITED STATES GOVERNMENT

Memorandum

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TO : ARA - Mr. Martin

DATE: May 19, 1962

FROM : Ambassador Mann

SUBJECT: Salinity of Colorado River Water

I. Problem The Wellton Mohawk irrigation district in Arizona, which was rehabilitated in 1952, installed a drainage system which began discharging to the Gila River and thence the Colorado River in September 1961 underground water which contains an amount of salts four times greater than the amount taken into the district in Colorado River water. Its present drainage system consists of some 70 pumps which draw water from a depth of about 100 feet and discharge the water into a lined conveyance channel on the project. Water brought into the project from the Colorado River is used to replace the water pumped out. As a result of this operation, the salinity of the water delivered to Mexico jumped from less than 1,000 p. p. m. in the winter of 1960 to around 2,500-2,800 p. p. m. in the winter of 1961. The Mexican Government has protested vigorously and threatens to take the matter to the International Court of Justice. In substance, the Mexican Government is insisting that the the United States must maintain a "salt balance" in the Wellton-Mohawk district.

II. Present Status of Problem A joint group of US and Mexican scientists was appointed, at the request of the Presidents of the US and Mexico, to study the problem and recommend a solution within 45 days. We expected a final joint report on May 15, but it has not been received because the Mexican Government doubts that the solution proposed by the US scientists would give adequate relief during an interim period of some 10 to 15 years before Wellton-Mohawk achieves "salt balance". Mexico agrees that over the long run the proposal of the US scientists would solve the problem.

The US scientists are proposing major modifications in the drainage system of the Wellton-Mohawk district. The major features of this proposal are: (a) installation of more pumps which will permit more pumping in summer to compensate for reduced or no pumping in winter and the tapping of areas where better quality water is present in the 90,000 acre district, (b) a by-pass lined drainage canal to permit dumping below Mexico's diversion point drainage water with a salinity index of more than 4,000 p. p. m, and (c) a new drainage canal which would be used to deliver to the river water with a salinity of less than 4,000 p. p. m. (The scientists chose a breaking point of 4,000 p. p. m. because this was the lowest that they calculated they could go and still obtain the quantity of water

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needed as return flow.)

The US scientists considered over a dozen proposals and settled on this one because it comes closest to satisfying the desires of both Mexico and the Wellton-Mohawk irrigation district. It would cost in the neighborhood of $20 million. Because Wellton-Mohawk has a closed underground basin, the US scientists suggested that the basin be used for river regulation. During the winter months Mexico is required to take only 900 second feet of water but actually receives an average of 1340 second feet. If some system were available to store the difference of 440 second feet and deliver it in the summer months, the US would get full credit. The scientists propose to store it in the underground basin at Wellton-Mohawk after the basin is cleaned out. This would save an estimated 75,000 acre feet of water annually which the Chairman of the US scientific group estimates to be worth $7,500,000. (It might be noted that the US gets no credit for Wellton- Mohawk drainage water now because it is all in excess of Mexico's order in the winter and it could therefore be wasted in winter without any loss to the US.)

The only other alternative which the US scientists considered as a serious possibility was a complete system of tile drains. This would provide drainage water with a salinity index of 3,000 p. p. m. In the interim period of 10 to 15 years this would be a preferable solution for Mexico. However, in the long run, the highly saline waters under Wellton-Mohawk would percolate up and pass out through the drains raising the salinity of the water possibly to a point where it would be unusable in the winter. The cost of tile drains was estimated at $45 million. Such a system was absolutely unacceptable to Wellton-Mohawk because it would have denied the district an underground reservoir. Further, the topography and other conditions in the Wellton-Mohawk indicate that a tile system would not be particularly satisfactory.

Based on discussions with the Bureau of Reclamation and Senator Hayden, I gather that the Bureau intends to look for some other solution which would give the Wellton-Mohawk irrigation district a full reservoir. Senator Hayden indicated, however, that if the Bureau would indorse the proposal of the US scientists he would accept it. The Bureau of Reclamation is seeking funds on a supplemental basis to study the feasibility of the proposal of the US scientists and also other possibilities. Based on my discussions, it appears that Reclamation believes that a solution involving more pumping in summer and less in winter would work. It is considering asking for $2.5 million to install an additional 25 wells in Wellton-Mohawk. Presumably these pumps would be in operation in the summer of 1963 and permit the district to discharge about 50% more water. It would then pump 50% less in the winter of 1963-64. The

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US scientists considered this scheme and rejected it as unacceptable to Mexico. It would not do anything to help achieve salt balance in the next 10 to 15 years. The Director of the US Salinity Laboratory considers this the issue. Although he considers that Mexico will have to improve its drainage system, he does not believe this is of practical importance in solving the present problem. Considering all circumstances, he does not consider that it would be feasible to install a drainage system in the Mexicali Valley which could handle water with a salinity index of 2,500 - 2,800 p. p. m. especially because the water has such a high sodium content. The Imperial Valley of California, with comparable soils, receives water with 900 p. p. m. and is having difficulties.

III. Issue. The issue is whether the President should (i) require the Bureau of Reclamation to modify the drainage practices of the Wellton-Mohawk district along the lines suggested by the US scientists or (ii) let the International Court of Justice decide the matter. (Because acceptance of the alternative that the Bureau of Reclamation seems to have in mind of pumping more in summer and less in winter would lead to ICJ action by Mexico, it is not considered a possible choice for the President.)

A. Consequences of alternative (i)

1. Domestically

a. The Colorado Basin states, except Arizona, have indicated acquiesence in the proposal of the US scientists. They would, however, prefer to do nothing.

b. Arizona has not agreed because it considers the proposal does not give Wellton-Mohawk all it wants. The real resistance is from Wellton-Mohawk. Senator Hayden has indicated he would accept the proposal if recommended to him by the Bureau of Reclamation. (If Wellton-Mohawk is required to pay the cost of the proposal, then it is possible that all of the Basin States would oppose.)

2. With Mexico

Mexico accepts the proposal as providing a solution over the long run. Mexico questions the increase in salinity it would have to accept in the interim. The US scientists consider that the water in the interim will have a salinity around 1,500 p. p. m. and that Mexico should be able to use this water without difficulty if it puts in the drainage system it is planning. It is doubted Mexico would take the matter to the ICJ, but if it did we would be in a good posture.

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B. Consequences of alternative (ii)

1. Domestically

The Basin States want to do nothing and they also want to avoid a court case. Arizona would seek through the Congress to prevent the President from allowing the US to accept ICJ jurisdiction. Because the issue involved concerns the interpretation of a Treaty and the obligations of the US under international law, the Legal Adviser of the Department considers that the ICJ would have jurisdiction and that the Connally Amendment would not apply. The Basin States seem to feel that the US would win, but they could lose much more from an adverse ICJ decision (as explained below) than from a decision by the President.

2. Internationally

a. Unless the President can give the Mexican President some assurance on how we plan to proceed in carrying out the recommendations of the US scientists, it will probably have an adverse effect on the President's visit. The Mexicans will probably consider the key to our attitude whether we act promptly to build a by-pass channel to keep the highly saline waters out of the river.

b. Relations between the US and Mexico would become severely strained and we could expect only limited cooperation from Mexico. Mexico could be expected to assert that our action made a mockery of the Alliance for Progress and Mexico's attitude would hurt the program.

c. We know that Mexico will take the case to the ICJ. It might take several years to get a decision. It is likely that the US would be required to modify its irrigation practices to take into account the interests of Mexico. This decision might take the form of requiring the US to maintain a "salt balance" at Wellton-Mohawk. The ICJ might alternatively say that the US is required to treat equally all riparian users lower than Wellton-Mohawk. At present Mexico receives all return flows. The US might be required to divide them equitably. While the case is pending, Mexico might have to forego all production in the winter to avoid ruining its soils permanently. Winter production in the Mexicali Valley is valued at $30 million and this would be part of the damages.

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d. Mexico would probably take the issue to the OAS. Mexico would probably get the support of all the Latin American countries because existing resolutions of the OAS support Mexico on the issue.

e. Mexico would also take the matter to the UN where documents and resolutions of the International Law Commission support Mexico's position. The US could expect little support for its position that it can deliver any water it wants to Mexico.

f. Mexico would probably cease to restrain the popular outcry against the US in Mexico.

g. Mexico would get strong support from the Soviet Bloc in international bodies and in Bloc propaganda output.

This memorandum has not discussed the alternative that the US might win in the ICJ, because I do not consider this a serious possibility. The Wellton-Mohawk district, the seven Basin States, and the Department of the Interior, base their position on the interpretation of the Treaty in the hearings before the US Senate. In that hearing the witnesses for the Treaty said that the US could deliver return flows to Mexico regardless of salt content which were the result of normal agricultural development in the US. These witnesses expected gradually increased salinity over the years as the Colorado Basin developed. One Reclamation witness testified that this might reach 2,700 p. p. m. at utimate development. Mr. Tipton, one of the principal negotiators of the Treaty for the US, indicated that he did not consider it possible that the salinity of the water would ever get so high that it could not be beneficially used by Mexico. If it did, however, he thought Mexico would have to accept it as part of the Treaty water. I am inclined to believe that the interpretation of the witnesses was correct. At least we would have a strong case in court. But I think it is a distinct possibility that the court would hold that the US had to distribute equitably among all users the return flows and could not deliver all of them to Mexico.

Whatever the interpretation, I think it has little to do with the case before us. The facts are that the United States suddenly, and without notice to Mexico, began emptying an underground lake of saline water in the Wellton-Mohawk district and dumping this salty water into the river for delivery to Mexico. Wellton-Mohawk contends that

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when Mexico agreed to accept waters from the Colorado River "from any and all sources" it agreed to accept the underground salt water from Wellton-Mohawk. The hearings before the Mexican Senate clearly show that Mexico did not understand the Treaty that way and indicate that there was no meeting of the minds on this point. Sound irrigation and drainage practice requires the maintenance of a salt balance and irrigation in the Colorado River basin is based on this concept. No irrigation district in the US has a guarantee as to quality but is expected to accept water which is the result of salt balance. The master's report in the case of Arizona v. California would go a long way toward making this law by providing that no irrigation district could get credit for return flows that cannot be beneficially used by the lower riparian. Mexico is asking that the US show the same solicitude for Mexico that it shows for US irrigation districts. No one has brought to my attention a single US or international law case that would support the contention of the Wellton-Mohawk district. On the contrary, all US law and such international law as there is on the subject would forbid the drainage practices of the Wellton-Mohawk district. The general rules of US law and international law require that persons act reasonably when their acts would affect others. No court could hold that Wellton-Mohawk may dump salt into the river with impunity because if it did it would set a precedent on water rights of riparians that would sanction anarchy and be ruinous to irrigated agriculture.

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